

ALLAN W. H. GÉ

Aug 55
LEG 4

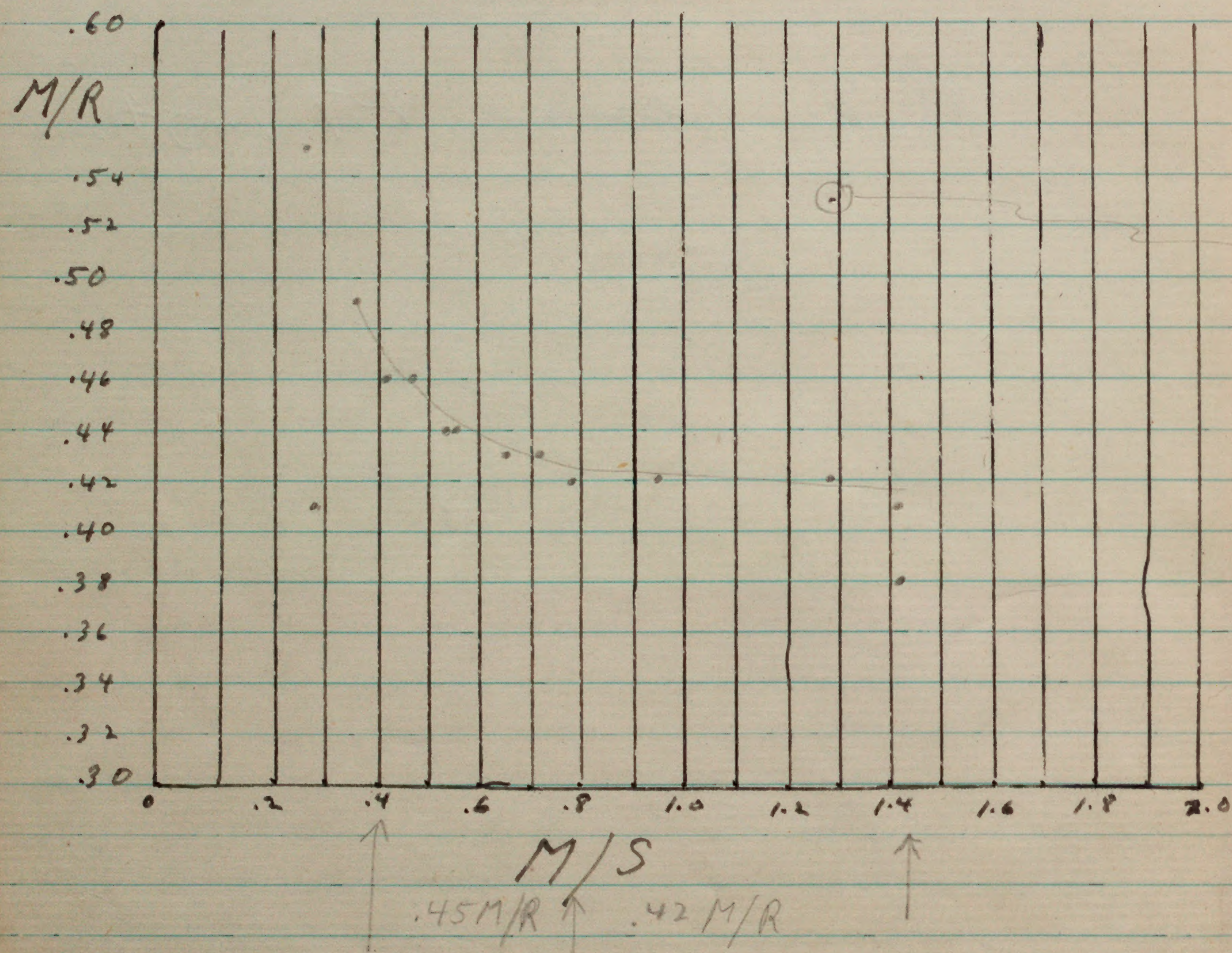
219

Log of Biological Collections
and Observations

R. V. Verna V-7, Leg 4.

Robert Bieri
Lamont Observatory
Palisades, New York

Net Calibration Aug. 3, 1955 Cont.



\therefore use $.44 \text{ M/R} \pm .02 = \pm 5\%$

$\frac{1}{2}$ Mnet use $1 \text{ M}^3/\text{min.}$

August 3, 1955

Calibration of Clarke-Bumpus meter

Distance towed = 15.5 yards $\pm \frac{1}{2}$ yard or $\pm 3\%$

Time Up	Revs. Up.	Time Down	Revs. Down
15 sec.	34	10 sec.	37
11 "	27 (wind may have blown meter)	18 "	34
22 "	33	20 "	33
26 "	32	27 "	32
30 "	31	40 "	29
35 "	31	50 "	26
50 "	35 25	10 "	35
11 "	34		

15.5 yards = 14.2 meters; no significant difference between up and down

Meters / Sec.	vs. Meters per Revolution	M/S vs. M/R
.95	.42	1.42 .38
1.29	.53	.79 .42
.65	.43	.71 .43
.55	.44	.53 .44
.47	.46	.36 .49
.41	.46	.28 .55
.28	.41	1.42 .41
1.29	.42	

August 5, 1955

1st messenger speed = ^{2.8}~~2.5~~ meters/sec.

2nd messenger speed = 2.5 meters/sec

both measured at 20° wire angle
on $\frac{1}{2}$ inch diameter wire

VERTICAL PROFILE 5 Aug 1955

Speed: 2 knots

V7-7

14 net

Time net open 1255 depth 10 fms

closed 1305

at 30 fms at each depth for 10 min = 20 min.

Vol. water filtered between 10-30 fms = 1400 M³ Tow.

Displacement vol. of plankton = 24 cc

wire $\angle = 20^\circ$

Lat.	Long.	Start	Lat	Long	fms
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FORAMS

Species

specimen

size in mm

60 ml. of 415 ml. sample.

Globigerina sp. 1

0.5 mm.

17 ml. dispil. volume in 1000 M³

position as V7-1

Calibration of ocular micrometer in AO scope 336951

$1 = .93 \text{ mm}$

9X : 4.3 major divisions = 4 mm.

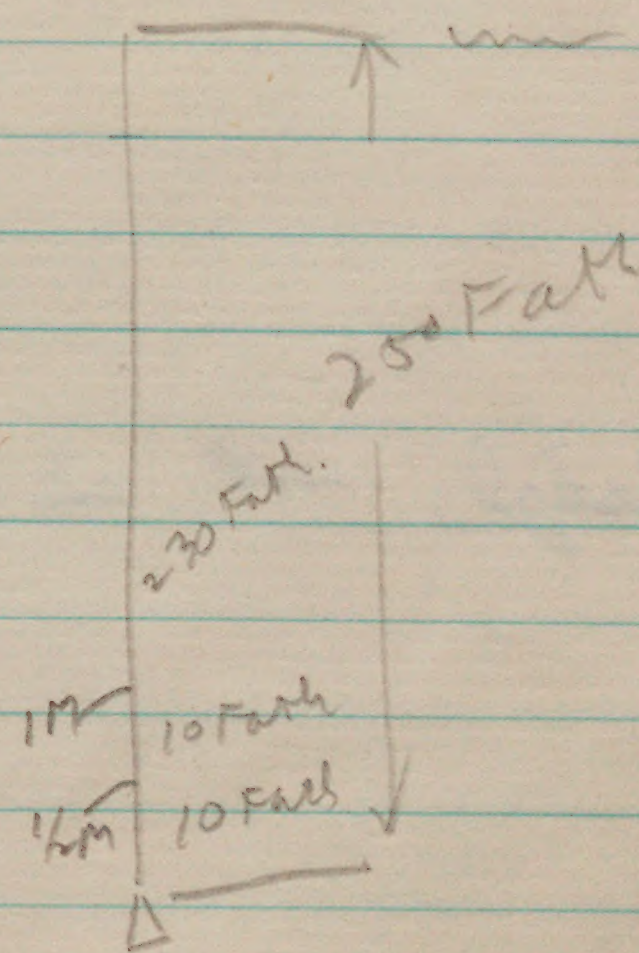
27X : 3 major divisions = 1 mm.

54X : 6 major divisions = 1 mm.

Depth of Tow

All tows hauled 0-300 M were made in the following manner:

The $\frac{1}{2}$ M net was put on 10 fathoms above the weight. The 1 M net was put on 10 fathoms above the $\frac{1}{2}$ M net. The net sheet was zeroed when the weight was at the surface and a total of 250 fathoms of wire was paid out in the tow. The nets were left at depth for 2 minutes before hauling in. Speed of descent and ascent was constant.



August 5, 1955

Sample V7-7

see 3 pages back

1 M net

Depth 20-60 meters

Time 1255-1305

= 10 mins

Wire L 20°

Vol. H₂O filtered 700 M³

Displ. vol. = 24 ml.

34 ml displ. vol. in 1000 M³

pressure same as V7-1

200 meters.

August 5, '55

V7-8

1 M net

Time net open: 1318, depth 50 fms 10 min, closed: 1340, = 22 min.

Depth 100 fms 10 min

Vol. water filtered 1540 M³

Displ. Vol. plankton = 14 cc

Wire L 40°

Start

Finish

Lat

Long

Lat

Long.

10 ml. displ. vol. in 1000 M³

pressure same as V7-1

300
2
600 meters

August 5, 1955

V 7-9 1M net

time net open: 1405, depth 150 fms, 10 min, to = 15 min.

300 fms 10 min, closed at 1420 at 300 fms

displ. vol. plankton = 2 cc

wire < 32°

vol. water filtered = 1050 m³

Start		Fm. 5	
Lat	Long	Lat	Long

2 ml. = displ. vol. in 10³ m³

protein same as V 7-1

550
2
1100 meters.

August 5, 1935

V 7-10 1M net

time open :: 1452 at 350 fms, 20 min to
550 fms 20 min, closed 1535 = ⁴³~~44~~ min.

vol displ. = 25 cc

wme \angle = 40°

vol water filtered = 3000 ml

20% living when brought up.

8 ml = displ. vol in 103 ml

protein same as V7-1

650
1300 meters.

August 5, 1953

V7-11

1 M net

Time open = 1621, at 650 fms, 15 min,
closed 1636 at 650 fms. = 15 min.

Wie C = 40°

displ. vol = 2 cc.

Vol. water filtered = 1050 M³

10% living when brought up.

FORAMS

Spp.	no	?	size mm.
globorotalia truncatulinoides	1		0.25 mm
globigerina Eggeri	1		0.50 mm

CHAETOGNATHS

Kr subtilis III in 100% = 3/10³ M³

S. lyria III " 100% = 3/10³ M³

S. macrocephala 1 in 100% = 1/10³ M³

S. sp. ?

S. sp. ?

S. sp. ?

} 3 in 100% = 3/10³ M³

2 ml. = disp. vol. of 1000 M³

print name on V7-1

1871

1871
Jan 1 - 1871
Feb 1 - 1871
Mar 1 - 1871
Apr 1 - 1871
May 1 - 1871
Jun 1 - 1871
Jul 1 - 1871
Aug 1 - 1871
Sep 1 - 1871
Oct 1 - 1871
Nov 1 - 1871
Dec 1 - 1871

1872

1872
Jan 1 - 1872
Feb 1 - 1872
Mar 1 - 1872
Apr 1 - 1872
May 1 - 1872
Jun 1 - 1872
Jul 1 - 1872
Aug 1 - 1872
Sep 1 - 1872
Oct 1 - 1872
Nov 1 - 1872
Dec 1 - 1872

1873

1874

1875

1875
Jan 1 - 1875
Feb 1 - 1875
Mar 1 - 1875
Apr 1 - 1875
May 1 - 1875
Jun 1 - 1875
Jul 1 - 1875
Aug 1 - 1875
Sep 1 - 1875
Oct 1 - 1875
Nov 1 - 1875
Dec 1 - 1875

1876

1876
Jan 1 - 1876
Feb 1 - 1876
Mar 1 - 1876
Apr 1 - 1876
May 1 - 1876
Jun 1 - 1876
Jul 1 - 1876
Aug 1 - 1876
Sep 1 - 1876
Oct 1 - 1876
Nov 1 - 1876
Dec 1 - 1876

1877

1878

August 5, 1955

Sample RV7-1
1 M net

Depth 0-25 meter net tow
Time 0048-0055 = 7 min.
Wire L 20°
Vol. H₂O fil. = 490 M³
Displ. vol. = 37 ml.

76 ml. = displ vol. / 10³ M³.

32-39M, 64-23W

August 5, 1955

Sample RV7-2
1 M net

Depth ¹²~~25~~-50 M
Time 0140-0146 = 6 min.
Wire L 20°
Vol H₂O fil. = 420 M³
Displ. vol. = 2 ml.

5 ml = displ. vol. / 10³ M³

note on RV7-1

August 5, 1955

Sample RV7-3
1 M. net

Depth 25-50 M
Time 0202-0213 = 11 min.
Wire angle 20°
Vol. H₂O fil. = 770 M³
Displ. vol. = 8 ml.

10 ml. = displ. vol. / 10^3 M³

part same as V7-1

August 5, 1955

Sample RV7-4
1 M. net

Depth 200-400 M
Time 0220-0245 = 25 min.
Wire angle 22°
Vol. H₂O fil. = ~~15~~ 1750 M³
Displ. vol. = 1 ml.

0.5 ml. = displ. vol. / 10^3 M³

part same as V7-1

August 5, 1955

~~Sample RV7-5~~
~~1 M net~~

Depth 2000-3000 M
Time 0337-0447 (net in 0300 out ?) = 70 min.
Wire L 25°

Note: Net fouled around wire due to too rapid descent of net. No sample obtained. Actual amount of wire out was 900-1400 fathoms due to slippage of meter wheel.

Daybreak about 0430

August 5, 1955

Sample RV7-5
1 M net

Depth 0-320 M (450 M.W.O.)
Time 0617-0650 = 33 min
Wire L 40°

Meter
out 31322
in 26076
5246

Vol. water filtered = $2300 \text{ M}^3 \div \frac{2300 \text{ M}^3}{33 \text{ min}} = 70 \text{ M}^3/\text{minute}$
Desigl. Vol. sample full of sargassum

Position same as V7-1

August 5, 1955

Sample VR 7-6
1/2 M net

Depth

0 -

Time

0911

Vol. H₂O filtered

Displ. Vol.

Vertical tow from bottom to surface on the piston corer.

piston core VR 7-1

See front of log for samples

VR 7-7 - VR 7-11

SERIAL NO. 1554

August 7, 1955

(V7-137A for 120M)

Sample VR 7-12
1/2 M net

(Sunday)

Depth 0-300M

Time 1613-1644 36

23 mins.

Wire L 55° 50, 50, 50.

Vol. H₂O filtered: 25 M³

Displ. vol: 8 ml sec. = 32 M³ / 40° 14'

60-14W, 34-10N

SERIAL NO. 1555

August 8, 1955

(Monday)

Sample VR 7-13
1/2 M net

Depth 0-300M

Time 0649-0710 = 21 mins

~~22 mins~~

Wire L 65° @ 0649, 65° @ 0653, 60° @ 0657 (250 Fath. W. O.),
60° @ 0659, 55° @ 0702, 50° @ 0703, 35° @ 0707.

Vol. H₂O filtered: 23 M³

Displ. vol: 10 ml sec. = 40 M³ / 35° 14'

35-14W, 59-30W

August 8, 1955-

Miscellaneous Notes

We have been in sargasso weed ever since the first station. Usually the clumps are about as far in diameter and very patchy in their distribution (anywhere from 100 to several hundred yards apart usually). Menzies reported seeing red-billed tropic birds on our first day out. Flying fish common the first 2 days, less common since.

At the first station there were many blue-grey trigger fish from 4-8 inches long swimming about the sargasso weed.

August 8, 1955

Sample V7-14
1/2 H net

Depth 0-300M
Time 1822-1853 31 mins.
Wind L 20°, 1823-40°, 1825-40°, 1835-45°, 1837-40°, 1839-40°, 1846-40°.
Vol. H₂O filtered: 70 ml
Displ. vol: 12 ml uc.

35-20N, 58-23W
22 27 0

SERIAL

1557

August 9, 1955

Sample V7-15

 $\frac{1}{2}$ M net (BT wheel)

Depth 0-300M

Time 1638-1707 down 1649 = 29 mins.

Wind 50°, 55°-1641, 60°-1642, 62°-1644

Vol. H₂O filt: 30 ml

Dupl. vol: 10 ML

35-07N, 57-34W

SERIAL

NO. 1558

August 9, 1955

Sample V7-16

 $\frac{1}{2}$ M net (BT wheel)

Depth 0-150M

Time 1707-1721 down 1712 = 14 mins.

Wind 55°

Vol. H₂O filtered: 15 ml

Dupl. vol: 6 ml uc.

35-11N, 57-34W

August 10, 1955

Sample V7-17
1/2 M net

Depth 0-530M

Time 0612-0635 down 0625 = 23 min.

W. W. L. 55°, 60°, 62°, 60°, 65°, down 55°, 55°, 55°

Vol. H₂O filtered

Dr. Dr. L. vol:

35-28N, 57-50W

August 10, 1955

Sample V7-18
1/2 M net

Depth 0-1700 feet

Time 1345-1357 = 12 min.

W. W. L. 25°, 25°, 45°, 45°, 30° - 2 min apart

Vol. H₂O filtered

Dr. Dr. L. vol: 2ML

35-20N, 57-35W

August 10, 1955

Obtained two small samples from Clarke-Bennett nets attached to repeating camera ^{sta 10}. Both contained small amounts of fossil ptropods as in previous camera sample (camera sta. #9) and some plankton.

While in ^{photo sta. 10} station a single trigger fish was seen about 8" long. We continue to see scattered small clumps (1 ft in diam or less) of sargassum.

August 11, 1955

Samples V7-19 a=1 M net; b=1/2 M net
1/2 M net

Depth 0-300 M

Time: 1447 - 1518 = 31 mins.

Vol. H₂O filtered: 30 M³

Displ. Vol: 16 ml sec. = 51 M³ = 44 ml / 10³ M³
1 M net

Depth: 0-300 M

Time: 1452 - 1517 = 25 mins.

Wind: 55, 55, 55, 51, 50, 48, 45, 43, 40, 39 at max.,
40, 40, 42, 47, 50, 53, 57, 60 night

Vol. H₂O filtered: 1750 M³

Displ. Vol: 77 ml sec. = 44 ml / 10³ M³

56-46 W, 36-32 N
45 31 D

SERIAL NO. 1561

August 12, 1955

Sample V7-20 a+b
1/2 M net

Depth: 0-300M

Time: 0635-0706 = 31 mins.

Vol. H₂O filtered: 33 M³

Displ. Vol: 12 ml = 37 ml / 10³ M³ = 35 ml / 10³ M³, 2-7 mm
1 M net

Depth: 0-300M

Time: 0640-0704 = 24 mins.

Wine L: 70, 55, 65, 65, 60 at max; 52, 50, 50, 45, 50.

Vol. H₂O filtered: 1750 M³

Displ. vol: 38 ml = 22 ml / 10³ M³

37-55N, 59-05W

57

02

0

SERIAL NO. 1562

August 12, 1955

Samples V7-21 a+b
1/2 M net

Depth: 0-300M

Time: 1940-2004 = 24 mins.

Vol. H₂O filtered: 22 M³

Displ. Vol: 1 ml = 5 ml / 10³ M³ = 4 ml / 10³ M³, 2-7 mm
11 ml.

1 M net

Depth: 0-300M

Time: 1942-2002 = 20 mins.

Wine L: 50, 50, 45, 45, 45, 43, 40 at max 34, 28, 26, 24, 26, 30, 34, 40, 40, 45.
¹⁹⁵⁷ 26, ²⁰⁰¹ 45.

Vol. H₂O filtered: 1400 M³

Displ. vol: 14 ml = 10 ml / 10³ M³

61-10W, 38-12N

11

12

0

SERIAL NO. 1563

August 12, 1955

Sample V7-22
1/2 M. net

Depth: 0-1 meter, drifting on camera station #

Time: 2140-2235 = 55 min.

~~Depth: 1-2 m. = 2 m. / 10² 11³~~
3 m.

August 13, 1955

Got a sample from each C-D net on the camera at camera station # 12. One net torn very badly & discarded. Samples consisted of corals, glass sponges, rediment & pteropod remains, one brittle star and a large peratoid. One of the photographs shows 6 peratoids very clearly. Also took several gastropods & a deep sea pecten with a limpet attached to it.

We were all set to make a net tow at 0630 this morning and had the rig set over the side when the captain came out on deck and made us stop. The weather is fine, lots of flying fish - still some rain squalls. Yesterday morning the character of the sea changed - more confused - and the water has been less clear since then. Menzies reported seeing another *Planirostris* yesterday.

Camera sta #12: from Roy Renshaw, track 3, 1956

Date: Aug. 12, 1955

Posn: 38-09N, 61-05W

Depth: ~~2140~~ 1743-2520 fath

Time: 2210-2353

side of sea mount.

sample V7-21

sample V7-21

August 13, 1955

Sample V7-23 a+b. ~~no sample V7-24~~

$\frac{1}{2}$ M net ~~($\frac{1}{2}$ + 1 M sample combined +~~

Depth: 0-300 M

Time: 1809-1848 = 39 min.

Vol. H₂O filtered: 70 M³

Displ. Vol:

1 M net

Depth: 0-300 M

Time: 1813-1846 = 33 min.

Wave L: 1810-15, 30, 32, 35, 37, 40, 45, 45, 49, 50, 54, 55,
69, 50, 60+down, 50, 65, 55, 1832-⁵⁰~~55~~

Vol. H₂O filtered: 230 M³

Displ. Vol:

63-10W, 38-37N

SERIAL NO. 1564

August 13, 1955

Sample V7-24 (~~$\frac{1}{2}$ + 1 M sample combined as~~

~~from as one sample + 7 V7-23~~

$\frac{1}{2}$ M net

Depth: 0-300 M

Time: 1841-1908 = 27 min.

Vol. H₂O filtered: 227 M³

Displ. Vol: 10 ml. = 37 ml. / 10² M³ = 34 ml. / 10² M³, 12-7

1 M net

Depth: 0-300 M

Time: 1844-1905 = 21 min.

Wave L: 35, 35, 40, 40, 1848, 40, 38, 35, 45, 35+down, 40,
40, 40 Down at 1852 start up at 1855

Vol. H₂O filtered: 1470 M³

Displ. vol: 40 ml. = 26 ml. / 10³ M³

Sample V7-23

SERIAL NO. 1565

August 14, 1955

Sample V7-25
1/2 M net

Depth: 0-300 m

Time: $0927 - 0958 = 31 \text{ mins.}$

2 d. H₂O filter: 30 mg

D. repl. Vol: $\frac{8 \text{ ml} + 10 \text{ ml}}{9 \text{ ml}} = 33 \text{ ml} / 10^2 \text{ ml}^3 = 33 \text{ ml} / 10^2 \text{ ml}^3 \cdot 2$

14 net

Depth: 0-300 M

June: $0930 - 0956 = 26$ min.

Wine L: 65-0931, 63, 60, 60, 55, 55, 52, 51, 40, 0943-20,
0944-10, 40, ~~approx~~ 60. Max wet at 0939 wL 40°.
start in at 0943, wL 40°.

2 L. H₂ O filtered: 1900 ml

Desyl. vol: 62ml. = 33ml / 10^3 M^3

39-53N, 64-00W.

See notes on next page.

August 14, 1955.

For net tow V7-25 the ship's speed was cut at 0922 and ship's speed resumed at 1000. A strong current set the nets under the ship during the tow even though the wind and sea were off our starboard beam. The low wire L's given on the opposite page should not be used to determine the depth of the nets because they are low to the nets going under the ship. Use 40°.

Just as the ship started to resume her cruising speed, we crossed a front or convergence marked by a slick about 5 feet wide extending as far as we could see on either side of the ship (about 300 yards). In the center of the slick was a ~~thick~~ solid band of sargassum weed about two feet wide. The edges of the slick were lined with foam. The bearing of the front ran from approximately $45^{\circ}T$ to $225^{\circ}T$. The surface temperature on the southeasterly side of the slick was $76.5^{\circ}F$, on the northwesterly side $75.0^{\circ}F$, a distance of 200 yards between the two observations. A BT was taken just after we crossed the slick to the north.

Presumably the net tow was taken to the south of the slick. As the trigger weight was being brought on board, a small clump of sargassum

was righted at a depth about 10 meters attached to
the wire and was removed as it came up to the
surface. The BT showed three marked temperature
inversions.

SERIAL NO. 1566

August 14, 1955

Sample V7-26
1/2 M net

Depth: 0-300 M

Time: 1754-1819 = 25 min.

Vol. H₂O filtered: 2.5 M³

Displ. vol: 18 ml. = 60 ml / 10³ M³ = 55 ml / 10³ M³, 2.7 min.

1 M net

Depth: 0-300 M

Time: 1758-1816 = 18 min.

Wire L: 1758-50, 1759-55, 1800-60, 1801-60, 1802-55, 1804-55, 1806-55 Max.

depth, 1808-55, 1811-55, 1812-57, 1814-57, 1815-70

Vol. H₂O filtered: 1400 M³ / 10³ M³

Displ. vol: 76 = 54 ml / 10³ M³

40-5 GM; 62-55

56

0

SERIAL NO. 1567

August 15, 1955

Sample V7-27
1/2 M net

Depth: 0-300M

Time: 0855-0923 = 28 mins.

Vol. H₂O filtered: 30 M³

Dissol. vol: 12 ml. = 40 ml / 10³ M³ = 37 ml. / 10³ M³, 2-7 ml.

1 M net

Depth: 0-300M

Time: 0858-0920 = 22 mins.

Wet L: 0858-58, 0902-45, 0904-40, 0906-38, 0908-50, 0911-65, 0913-70
0915-67, 0917-70, 0919-70 max 0907-38 + 0909-55.

Vol. H₂O filtered: 1600 M³

Dissol. vol: 53 ml. = 33 ml. / 10³ M³

42-53 62-67 Don

Water depth about 500 fathoms.

SERIAL NO. 1568

August 15, 1955

Sample V7-28
1/2 M net

Depth: 0-300M

Time: 1740-1806 = 26 mins.

Vol. H₂O filtered: 30 M³

Dissol. vol: 4 ml. = 12 ml / 10³ M³ = 11 ml. / 10³ M³, 2-7 ml.

1 M net

Depth: 0-300M

Time: 1742-1804 = 22 mins.

Wet L: 1744-55, 1745-57, 1746-59, 1747-59, 1748-59, 1749-59, 1750-59,
1755-59, 1756-60, 1757-60, 1758-60, 1759-62, 1800-62, 1801-61
max. 1752-58 + 1754-58.

Vol. H₂O filtered: 2600 M³

Dissol. vol: 21 ml. = 13 ml. / 10³ M³

42-53 62-67 51 0
Water depth 200 fathoms

SERIAL NO. 1569

August 16, 1955

Sample V7-29 warm water fauna
1/2 M net

Depth: 0-300 M

Time: 0823-0855 = 32 min.

Vol. H₂O filtered: 30 M³

Displ. vol: 3 ml. = 10 ml / 10³ M³ = 8 ml. / 10³ M³ x 2 = 16 ml.

1 M net

Depth: 0-300 M

Time: 0827-0851 = 24 min.

Wre L: 0827-55, 0828-57, 0830-55, 0832-50, 0834-50, 0836-52,
0842-50, 0844-47, 0846-45, 0848-48, 0850-52, max. 0838-57
and 0840-52.

Vol. H₂O filtered: 1700 M³

Displ. vol: 38 ml. = 22 ml. / 10³ M³

SERIAL NO. 1570

August 16, 1955

Sample V7-30
1/2 M net

Depth: 0-300 M

Time: 1745-1815 = 30 min.

Vol. H₂O filtered: 30 M³

Displ. vol: 4 ml. = 12 ml / 10³ M³

1 M net

Depth: 0-300 M

Time: 1754-1812 = 18 min.

Wre L: 1745-55, 1755-65, 1757-60, 1759-60, 1801-58, 1803-58, 1805-58, 1806-
58, 1807-58, 1808-60, 1809-59, 1810-60, 1811-62, max. 1802-58 + 1804-
58

Vol. H₂O filtered: see note below

Displ. vol: 12 ml = 9 ml / 10³ M³ x 2 = 18 ml / 10³ M³

43-15N 53-15W ✓

100 ml bottle broke and net probably did not fish most of time.

August 16, 1955

A yellow warbler flew on board this afternoon and spent about one-half hour on and about the ship. Two jaegers - probably pomarine - followed the ship this afternoon for about a half hour. A small, noisy bird also was seen - possibly a petrel. About six jaegers were about the ship yesterday afternoon. Yesterday evening (15th) Monzie reported seeing a school of porpoises - about 50 in the school. Three or four came over close to the ship. He said they were beaked and had white bellies but, ^{to white} not sharply limited in the extent (not Dall's porpoise).

August 17, 1955

Sample V7-31
1/2 M net

Depth: 0-300M
Time: 1751-1820 = ^{23?}_{32?} 29 min.
Vol. H₂O filtered: 30 M³
Displ. vol: 3 ml. = 10 ml / 10³ M³ = 7 ml. / 10³ M³, .2-.7 mm.

1 M net

Depth: 0-300M
Time: 1753-1823 = ^{20?}_{27?} 30 min.
Wire L: 1753-50, 1755-50, 1756-50, 1757-49, 1759-47, 1800-46, 1802-48, 1804-45, 1805-45, 1806-45, 1807-44, 1808-42, 1809-38, 1810-36, 1812-35, 1813-36, 1814-37, 1815-38, 1816-37, 1817-40, 1818-41 at noon light
1806-1808
Vol. H₂O filtered: 210 M³
Displ. vol: 66 ml. = 32 ml. / 10³ M³

42-609, 1809-50, 1810-50
Floating Truana sighted

August 18, 1955

Sample V7-32
1/2 M net

Depth: 0-300M

Time: 0854-⁰⁹²⁴~~0914~~ = 30 min.

Vol. H₂O filtered: 30 M³

Displ. vol: 12 ml. = 40 ml / 10³ M³ = 38 ml / 10³ M³, 2-7 min.

1 M net

Depth: 0-300M

Time: 0857-⁰⁹¹⁹~~0924~~ = 22 min.

Specimens: 0857-65, 0858-66, 0859-63, 0900-61, 0901-60, 0902-59, 0903-59,
0904-60, 0905-60, 0906-60, 0907-60, 0908-59, 0909-58, 0910-58,
0911-58, 0912-60 Bieri, 0913-59, 0914-59, 0915-55 Menzies, 0916-59
0917-58. max depth at 0909-0911.

Vol. H₂O filtered: 1500 M³

Displ. vol: 32 ml. = 20 ml / 10³ M³

August 18, 1955

Sun came out during the morning net tow for the first time in two days. This afternoon we had about two hours of a warm to cool rain.

Crossed from steel grey to blue water between BT# V7-622 + V7-623. at 623 saw a small patch of *Sargassum* weed (1330). Later (1630) passed several more clumps + we brought one aboard for examination. The boundary between grey and blue water is broken or intermittent.

During the evening tow (next page) about 20 petrels (with white rumps) were playing about the stern of the ship.

42-210, 52-210 5 ✓

SERIAL

NO. 1656

August 18, 1955

Sample V7-33
1/2 M net

Depth: 0-300M

Time: 1749-1812 = 23 mins. ✓

Vol. H₂O filtered: 27 M³Displ. vol.: 18 ml. = 67 ml / 10² M³ = 62 ml / 10² M³, 2.7 ml

1 M net

Depth: 0-300M

Time: 1751-1810 = 19 mins.

Wre L: 1751-68, 1752-62, 1753-60, 1754-60, 1755-58, 1756-55, 1757-55,
1758-55, 1759-55, 1800-55, 1801-55, 1802-55, 1803-55, 1804-55, 1805-55,
1807-55, 1808-60, 1809-63, max 1757+1800.Vol. H₂O filtered: 19 M³Displ. vol.: 64 ml. = 46 ml. / 10³ M³

SERIAL

NO. 1657

August 19, 1955

Sample V7-34
1/2 M net

Depth: 0-300M

Time: 0848-0919 = 31 mins. ✓

Vol. H₂O filtered: 25 M³Displ. vol.: 10 ml. = 33 ml / 10² M³ = 31 ml / 10² M³, 2.2 ml

1 M net

Depth: 0-300M

Time: 0850-0917 = 27 mins.

Wre L: 0851-63, 0852-55, 0853-57, 0854-53, 0855-53, 0856-50, 0857-41,
0858-41, 0859-40, 0900-40, 0901-40, 0902-42, 0903-44, 0905-44,
0906-42, 0907-45, 0908-40, 0909-40, 0910-38, 0911-35, 0912-30,
0912 1/2-23, 0913-19, 0914-28, 0915-40, 0915 1/2-56, 0916-64.Vol. H₂O filtered: 14 M³ | max 0902-44 + 0904-44.Displ. vol.: 36 ml. = 19 ml. / 10³ M³

August 19, 1955

We are still heading towards the Azores on 110°T. The sky is overcast this morning with a continuous light drizzle. The water appeared steel grey at the morning net tow, but patches of Sargassum were seen occasionally. There was no wind and little sea during the tow, so the captain steered in a circle - could not control the wire angle.

1700 - sighted a flight of flying fish - about 10 fish for first time since leaving the north. Sun has just come out & water is getting much warmer. Sargassum is quite common now.

SERIAL NO. 1573

August 19, 1955

Sample V7-35
1/2 M net

Depth: 0-300M

Time: 1752-1815 = 23 mins.

Vol. H₂O filtered: 35 M³

Weight vol: 5 ml. = 20 ml / 10² M³ = 18 ml / 10² M³, 35.7 M³

1 M net

Depth: 0-300M

Time: 1754-1812 = 18 mins.

Wire L: 1754-55, 1756-55, 1757-50, 1758-50, 1759-50, 1800-55, 1801-57, 1802-57, 1803-57, 1804-55, 1805-55, 1806-57, 1807-55, 1808-57, 1809-58, 1810-60, 1811-60, 1812-60; mod. 1801-1803.

Vol. H₂O filtered: 1000 M³

Weight vol: 32 ml. = 23 ml. / 10³ M³

SERIAL NO. 1574

August 20, 1955

Sample V7-36
1/2 M net

Depth: 0-300 M

Time: 0836-0906 = 30 min.

Vol. H₂O filtered: 30 M³

Displ. Vol: 6 ml. = 2 ml. / 10² M² = 18 ml. / 10² M², 2-7 min.

1 M net

Depth: 0-300 M

Time: 0838-0904 = 26 min.

Wre L: 0839-30, 0840-35, 0841-38, 0842-38, 0843-35, 0844-26, 0845-37,
0846-38, 0848-36, 0849-35, 0850-33, 0851-32, 0852-32, 0853-32,
0854-35, 0855-31, 0856-30, 0857-29, 0858-30, 0859-33, 0900-34
0903-40, max 0950-0952.

Vol. H₂O filtered: 1800 M³

Displ. vol: 43 ml. = 24 ml. / 10³ M³

40-17N, 48-54W D

SERIAL NO. 1575

August 20, 1955

Sample V7-37
1/2 M net

Depth: 0-300 M

Time: 1749-1821 = 32 min.

Vol. H₂O filtered: = 35 M³

Displ. Vol: 17 ml. = 50 ml. / 10² M² = 45 ml. / 10² M², 2-7 min.

1 M net

Depth: 0-300 M

Time: 1751-1817 = 26 min.

Wre L: 1751-65, 1752-67, 1754-65, 1755-60, 1758-60, 1800-60, 1802-60,
1804-60, 1806-60, 1808-57, 1810-55, 1812-56, 1814-62, 1816-70.
max. 1803-58 + 1805-60.

Vol. H₂O filtered: 1800 M³

Displ. vol: 89 ml. = 50 ml. / 10³ M³

39-06N, 48-38.5W D

This tow was started just as the sun was setting and we
hit the scattering layer as it came up. At 1804 S.L. depth was
140 meters, at 1810-100 M.

August 21, 1955

This morning's net tow was cancelled by the Captain who said he was running south to avoid a gale to the north. Said we might be able to make us in the afternoon. The one of the staysails has been hoisted and seems to be steadying the ship although it is not sheeted in hard enough to keep it full at all times. There is a stiff breeze blowing, but seas are only mild and it is good net tow weather.

Yesterday early in the afternoon we went through several colonies of Sargassum and I saw one this morning.

The evening's tow was also cancelled by the Capt. but weather not that bad.

SERIAL NO. 1576

August 22, 1955

Sample V7-38
1/2 M net

Depth: 0-300M

Time: 0841-0914 = 33 mins.

Vol. water filtered: 30 M³

Displ. vol: 10 ml. = 33 ml / 10³ M³ = 312 ml. / 10³ M³ = 24.3 ml.

1M net

Depth: 0-200M

Time: 0844-0911 = 27 mins.

Zone L: 0844-50, 0845-48, 0846-49, 0846.5-33, 0846.75-30, 0846.90-21, 0847-18, 0848-18, 0848.5-22, 0849-27, 0849.5-30, 0850-32, 0850.25-42, 0850.5-47, 0850.75-52, 0851-53, 0851.5-53, 0854-52, 0855-52, 0856-51, 0857-50, 0858-50, 0859-48, 0900-46, 0901-40, 0902-41, 0902.5-42, 0903-45, 0905-51, 0906-52, 0907-59, 0907.5-60, 0908-63, 0909-67, 0910-72. max. 0856.5-51, 0858.5-49.

Vol. H₂O filtered: 1900 M³

Displ. vol: 33 ml. = 17 ml. / 10³ M³

34-45M 50-14M to 34-44M, 50-17M D

SERIAL NO. 1577.

August 22, 1955

Sample U7-39
1/2 M net

Depth: 0-300M

Time: 1740-1811 = 31 mins.

Vol. H₂O filtered: 30 M³

Drip vol: 10 ml. = 33 ml / 10³ M³ = 30 ml / 10³ M³, 2-7 ml

1 M net

Depth: 0-300M

Time: 1743-1809 = 26 mins.

Wave L: 1743-60, 1744-64, 1745-64, 1746-65, 1747-62, 1748-60, 1749-62
1750-60, 1752-60, 1753-60, 1755-55, 1758-52, 1759-52, 1800-49
1801-45, 1802-42, 1803-42, 1804-42, 1805-41, 1806-42, 1807-46,
1808-55 max. 1754-56, 1756-53.

Vol. H₂O filtered: 1800 M³

Drip vol: 48 ml. = 27 ml / 10³ M³

34-18N, 51-22W & 24-18N, 51-23N,
0

August 23, 1955

Sample U7-40
1/2 M net

Depth: 0-300M

Time: 0846-0917 = 31 mins.

Vol. H₂O filtered: 30 M³

Drip vol: 6 ml. = 20 ml / 10³ M³ = 18 ml / 10³ M³, 2-7 ml

1 M net

Depth: 0-300M

Time: 0849-0915 = 26 mins.

Wave L: 0849-50, 0850-45, 0851-47, 0852-45, 0853-45, 0853.5-42, 0854-
42, 0855-42, 0856-43, 0857-47, 0858-49, 0859-49, 0900-50, 0901.5-
48, 0902-45, 0902.5-40, 0903.5-37, 0904-34, 0905-31, 0905.5-
28, 0906-28, 0906.5-27, 0907-28, 0908-36, 0908.5-42, 0909-
45, 0909.5-43, 0910-52, 0911-56, 0912-54, 0912.5-61,
0913-65, 0913.5-66, 0914-69, 0914.5-70.

Vol. H₂O filtered: 1800 M³

Drip vol: 32 ml. = 18 ml / 10³ M³

33-15N, 53-37W, 20-27-14N, 53-38W D.

August 23, 1953

Sample V7-41
1/2 M net

Depth: 0-300M

Time: 1745-1808 = 23 min.

Vol. H₂O filtered: 27 M³

Displ. vol: 10 ml.

1 M net

Depth: 0-300M

Time: 1746-1805 = 19 min.

Wre L: 1746-60, 1748-60, 1749-60, 1750-60, 1751-60, 1752-60, 1753-58,
1754-57, 1755-57, 1758-58, 1759-54, 1759.5-57, 1759-60, 1800-61,
1802-62, 1804-64, 1805-64, 1806-45. max. 1754-1756.

Vol. H₂O filtered: 1300 M³

Displ. vol: 31 ml.

32-53M, 55-62M, D

August 24, 1953

Sample V7-42
1/2 M net

Depth: 0-300M

Time: 0835-0904 = 29 min.

Vol. H₂O filtered: 29 M³

Displ. vol: 1 ml.

1 M net

Depth: 0-300M

Time: 0837-0901 = 24 min.

Wre L: 0837-70, 0838-68, 0839-65, 0840-60, 0840.5-53, 0841-50, 0842-
43, 0842.5-40, 0843-40, 0844-37, 0844.5-32, 0845-30, 0845.5-
27, 0846-20, 0846.5-27, 0847.5-34, 0848-36, 0848.5-40,
0849.5-44, 0850-45, 0851-46, 0851.5-45, 0852-48, 0853-50,
0853.5-51, 0855-53, 0856-53, 0856.5-53, 0857.5-54, 0858-
56, 0858.5-55, 0859-55, 0859.5-57, 0860-57, max. 0847-31, 0848-
42

Vol. H₂O filtered: 1600

Displ. vol: 22 ml. large org. (12 org., 10 amphipods, 1 squid + many small)
12 ml. small org.

32-70 N, 61-80 W

August 24, 1955

Sample V7-43
1/2 M net

Depth: 0-300 M

Time: 1752-1828 = 36 min.

Vol. H₂O filtered: 37 M³

Drift. vol: 12 ml small org.

26 ml bag = salps, 1 amphipod, + 1 squid

1 M net

Depth: 0-300 M

Time: 1756-1824 = 28 min.

Wreel: 1756-65, 1758-65, 1800-65, 1802-67, 1804-67, 1806-65, 1807-61,
1808-57, 1809-57, 1812-58, 1814-60, 1816-60, 1818-63, 1820-63,
max. 1808-58, 1810-58.

Vol. H₂O filtered: 2100

Drift. vol: 10 ml. large org. (salps, 1 amphipod, + 1 squid).

55 ml. small org.

32-70 N, 63-50 W

Net was opened below the surface, did not close & surface
when hauled up.

SERIAL NO: 1579

August 25, 1955

Sample V7-44
1/2 M net

Depth: 0-300 M

Time: 0845-0923 = 38 min.

Vol. H₂O filtered: 38 M³

Drift. vol: 6 ml (large Carinaria not included).

1 M net

Depth: 0-300 M

Time: 0851-0918 (2nd msgn) = 27 min.

Wreel: 0853-50, 0854-50, 0855-50, 0858-49, 0859-49, 0858-49, 0859-50,
0900-48, 0902-47, 0903-45, 0905-47, 0907-42, 0908-41, 0908.5-40,
0909-42, 0910-41, 0911-41, 0912-42, 0913-41, 0914-44, 0915-45,
0916-47, 0917 1/2 -46. max. 0904-44, 0906-41.

Vol. H₂O filtered: 1800

Drift. vol: 32 ml. small org.

10 ml. lg. org. (salps + 1 squid).

32-30 N, 64-30 W.

Steaming in a straight line. 2nd msgn. release net off
at surface when 1st msgn. was set down. Net was hauled in and
reset so as to simulate correct operation of 1st msgn. 2nd msgn.
closed net ok. at end of tow (below the surface).

August 25, 1955

Noted the first red-billed tropic bird we have seen
in some days (some last noted in this log) this
afternoon at 1215.

August 25, 1955

Sample V7-45
1/2 M net

Depth: 0-300M
Time: 1756-1835 = 39
Vol. H₂O filtered: 39 M³
Displ. Vol.: 10 ML

1 M net

Depth: 0-300M
Time: 1802-1830 ~~net did not operate due to failed bubble~~ 28
Wire L: 1802-50, 1804-50, 1805-50, 1806-53, 1807-55, 1808-55, 1811-57,
1814-50, 1815-50, 1817-50, 1818-53, 1819-54, 1820-53, 1821-54, 1821-55,
1822-55, 1824-58, 1825-55, 1826-50, 1828-57. ~~was 1827-52~~ - 1814.
Vol. H₂O filtered: 1900 M³
Displ. vol: 38M

at start wire L to great and net did not open on first
surge. Net hauled back up and triggered to simulate correct 1st.
surge operation. Net then set down

B2 i - 1746

SERIAL NO. 1580

August 26, 1955

Sample V7-46
1/2 M net

Depth: 0-300M

Time: 0200-0249 = 49 min

Vol. H₂O filtered: 49 M³

Displ. vol: 12 ML

see

1 M net

Depth: 0-300M

Time: 0208-0242 = 34 min.

Use C: 0211-27, 0211.5-28, 0212-32, 0212.5-35, 0213-39, 0213.5-43, 0214-44, 0214.5-46, 0215-47, 0215.5-50, 0216-51, 0217-54, 0218-55, 0219-56, 0220-58, 0221-59, 0222-60, 0223-59 max depth, 0224-59, 0225-57, 0226-58, 0227-55, 0228-55, 0229-55, 0230-55, 0231-56, 0232-56, 0233-56, 0234-58, 0235-57, 0236-54, 0237-52, 0238-52, 0239-53, 0240-57, 0241-58, max 0222+0224

Stopped 0238 to 0237, became wise to close & ship.

Vol H₂O filtered: 2300

Displ. vol: 48 ML

SERIAL NO. 1581

August 26, 1955

Sample V7-47 (No closing-opening = oblique tow)
1/2 M net

Depth: 250-500 fath with net.

Max Depth = 450m.

Time: approx 0250-0315 = 85 min

Vol. H₂O filtered: 85 M³

Displ. vol: 8 ML

32-30N, 64-30W

1 M net

net lost due to weak spring on closing pin of release.

Use C: ~~0222-39~~, 0258-55, 0259-48, 0300-44, 0301-40, 0305-37, 0302-32, 0302.5-27, 0303-22, 0304-20, 0304.5-24, 0305-24, 0306-38, 0306.5-44, 0307-47, 0308-45, 0309-48, 0310-46, 0312-42, 0313-45, 0314-40, 0314-38, 0315-30, 0315-26, 0315-22, 0316-19, 0316-22, 0317-30, 0317-25, 0318-39, 0319-40, 0320-42, 0321-41, 0322-38, 0322.5-35, 0323-38, 0323.5-24, 0324-18, 0324.5-09, 0325-08, 0325.5-24, 0327-45, 0329-50, 0330-40, 0331-30, 0332-25, 0333-22, 0333.5-30, 0334-38, 0334.5-42, 0334.75-48, 0335-51, 0335.25-55, 0335.5-57, 0336-62, 0337-65, 0337.25-64, 0337.5-71, 0338-72, 0339-71, 0340-71, 0340.5-72, 0341-74, 0341.5-73, 0342.5-69, 0343-68, 0344-65, 0345-62, 0345.5-61, 0346-58, 0347-58, 0347.5-58, 0348-55, 0349-53, 0350-53, 0351-53, 0352-52, 0354-49, 0355-47, started from 350 fath out at 0359. 0358-50, 0357-47, 0358-46, 0359-46, 0400-45, 0401-44, 0403-44, 0404-40, 0405-40, 0406-40, 0407-42, 0408-41, 0409-44, 0410-45, 0411-47, 0412-49, 0412-50, 0413-50, 0414-50, 0415-47, 0416-46, 0417-43, 0418-40 max at 0326-139, left max. 0328-46, reached 250 fath at 0442 stated back down at 0344, reached 350 fath out at 0351.

August 26, 1955

During the deep BT cast three sharks circled about the ship for over an hour. All appeared to be the same species - one about 8 feet long was hooked and hauled half-way into the water before by Craigie and myself before the line was cut by the shark's teeth. The other two were smaller - about 5 feet. One had 3 pilot fish, one had 2 and one had one.

The one with 2 pilot fish also had a small Remora attached to the dorsal side of the left pectoral fin. All the sharks had white tipped dorsal and pectoral fins and a black spot ~~above~~ dorsal and ventral on the caudal peduncle. They were very heavy through the head region.

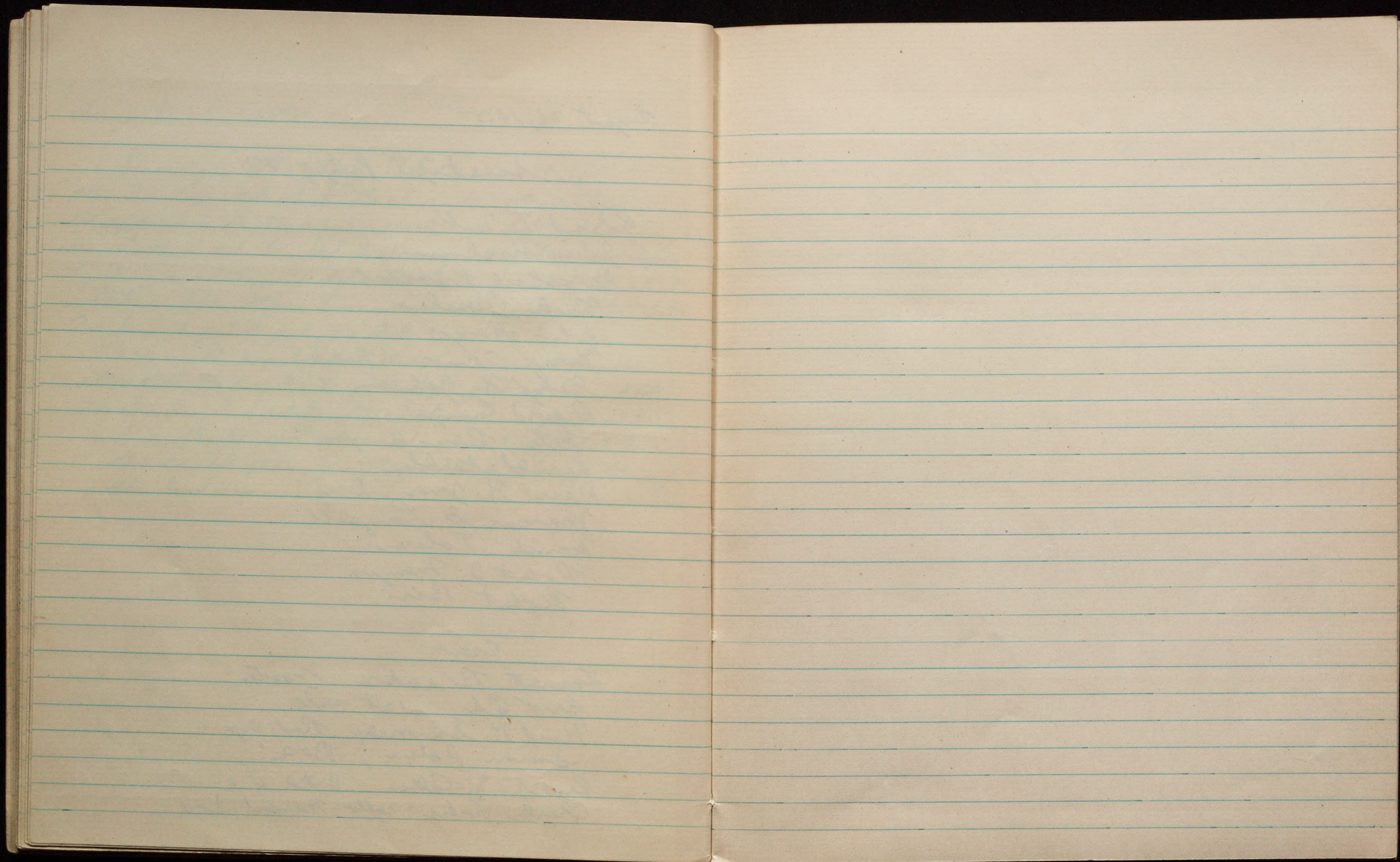
August 26, 1955

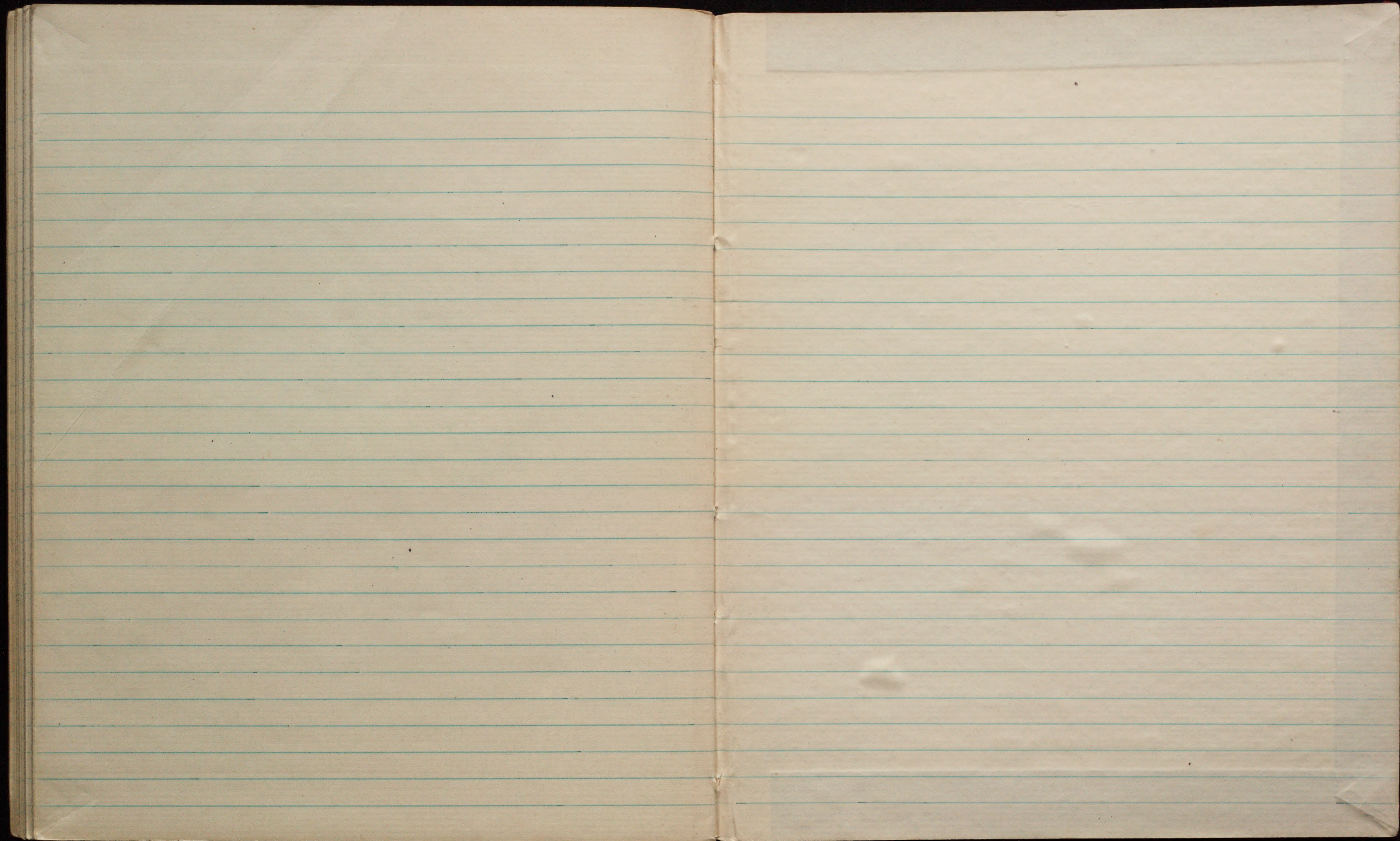
Scientific Party V7.

Edward T. Miller
Julius Hirshman
Nicolai Pukatch
Charles Pershaw
John Frayo
Henry Oxner (Red)
George H. Johnson
David Craigie
Peter Burchenger
Donald Sifton
David H. Jones (Ding)
Marcus E. Langseth
Manish Talwani
Robert J. Manges
Robert Bieri

Crew

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Arvo Ek 1st mate
Rund H. Simonsen Rad. Ogn.
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